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## INVENTORY / MATERIAL WISDOM

### *Learning from object lessons*

Adrian Young

*"Inventory" is a column that examines or presents a list, catalogue, or register.*

"The slightest impact was sufficient to instantly reduce them to anti-matter!" declares Batman. "You mean they won't be coming back?" asks his boy ward. "No Robin, not in this universe," he replies. "Let that be an object lesson in the dangers of tampering with the laws of Mother Nature."

An object lesson. The phrase is ubiquitous, and began to be widely used long before Batman's teachable moment. In an address to naval cadets at Annapolis in 1906, Theodore Roosevelt held up John Paul Jones as an "object lesson" on manly disregard for death "to be taken into their innermost hearts," while in 1939 Evelyn Waugh offered Mexico as an object lesson on the inherent failure of centralized economic planning.<sup>1</sup> An object lesson is, in its modern idiomatic usage, a specific example meant to demonstrate some inviolable but self-evident principle—and often offered as a warning to those who might stray from it.

But the "object lesson" is itself an object with its own history. Its genealogy stretches back to war-torn Napoleonic Switzerland and a Swiss education-reformer named Johann Heinrich Pestalozzi. A correspondent of Goethe and Herder, Pestalozzi founded a series of schools on Romanticist principles, beginning in 1798. His was a sentimental and hands-on pedagogy; students, under the sympathetic tutelage of facilitative teachers, were meant to become masters of their own education. Pestalozzi broke the world down into its most basic elements: words, sounds, and, at root, senses. From the latter, his pupils, like Condillac's poor statue, were meant to reconstitute their physical, intellectual, and moral universe. They learned from nature, the home, the workshop, and, above all, the material object. Regard this window. Consider that tree. What do they feel like? What are they made of? What can they tell us?

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Mural in the town of Rapperswil, Switzerland, depicting Johann Heinrich Pestalozzi.

Pestalozzi's methods earned him admirers across the continent, and followers set up schools based on his principles.<sup>2</sup> In Britain, his greatest proponents were Charles and Elizabeth Mayo, an Anglo-Irish couple who, following an influential visit to the Swiss educator's school in Yverdon, established a Pestalozzian program in Surrey. They adopted the master's method of teaching from objects, which Elizabeth codified and collected in her 1831 book, *Lessons on Objects*. It contains what is likely the first printed iteration of the phrase "Object Lesson." Mayo followed *Lessons on Objects* with two similar pedagogical collections, *Lessons on Shells* and *Lessons on Common Things*, versions of which stayed in print for the rest of the century.

Mayo's lessons followed a fixed pattern. First, students engaged an object with all of their senses: looking at it, picking it up, feeling its weight and contours, and if appropriate, listening to it, smelling it, and even tasting it. Next, teachers gently guided their pupils to appropriate words and names—but only after the object's thorough investigation, in accordance with Mayo's principle edict. Direct experience "of a quality brings it forcibly before their minds," she wrote. "They then feel the want of a term to express the idea thus formed, and the teacher gives them a word, as a sign for it, in order to express it upon their minds."<sup>3</sup> Eventually, students inferred objects' origins and uses, or classified them according to similarities and differences. Only then, once the sensory and material groundwork was in place, could advanced students compose essays or prepare presentations about the objects at hand.

It was a pedagogy centered on a belief that childhood was a period of pure, sensory observation and discovery. Object lessons refined and disciplined that sensory inquisitiveness, honing it into a basis for understanding the whole of reality. "The development of these powers gives animation to the dull, and precision to the lively, whilst it promotes that clearness of apprehension ... without which our judgments are unsound, and our reasonings inconclusive," wrote Mayo. "As the sphere of observation is enlarged, and the pages of history or the fields of science are explored, the mind, accustomed to accurate investigation, will not rest content with less than satisfactory evidence, either in morals or in science."<sup>4</sup> Object lessons engendered a mode of inquisitiveness that was not just elucidatory but redemptive, revelatory not just of nature but also of society and morality. Students trained through focused sensory engagement with objects could use that same framework to understand the loftiest of sentiments. Feel a potato and know (or know how to know) truth and beauty, good and evil.

High stakes, to be sure. What, then, were the humble objects on which the Mayos built such lofty ambitions? Elizabeth's first book offered lessons on 133, including such diverse entries as glass, India rubber, wax, whalebone, oysters, and gutta-percha. A piece of local bark or a lowly thimble was just as likely to appear as an exotic spice or piece of gold. Each object lesson offered pupils an opportunity to

experience and articulate a given object's characteristics. Lesson VII, "An Apple," taught the student to feel the various qualities of the apple and its component parts: the whole fruit is "odorous," "juicy," "pleasant;" the core is "membranaceous," "hard," "yellow." Similar lessons comprising items and descriptors filled hundreds of pages in multiple books. India rubber is "elastic."<sup>5</sup> Whalebone is "stiff."<sup>6</sup> Wax is "fusible."<sup>7</sup> Give the students plums, and they could "be made to understand the quality astringency," not as an abstracted notion, but "by drawing their attention to the contracting effect produced in the mouth by eating a sloe."<sup>8</sup> The lessons built an internalized vocabulary of senses and sentiments with which to grasp the world. With its lists of items and associated adjectives, *Lessons on Objects* was only an incomplete physical instantiation of the vast mental lexicon it was meant to help Mayo's students develop.

Her textbooks were filled with dozens of lists, inventories of the qualities her students were intended to derive. The lessons were not meant as mechanical exercises; she did not expect students to arrive at every word listed, nor were her inventories exhaustive. Rather, Mayo's many lists of adjectives were meant only to evoke the edifying, moralizing poetry already hidden in every piece of the material world. And these were merely examples, object lessons in object lessons. Following a similar template, the entire world and all of its component parts were teachable and decipherable, the sum of legible feelings and affects.

#### MUSTARD SEED.

#### LESSON XI.

#### MUSTARD SEED.

Ideas to be developed by this lesson—*indigenous, pulverable, spherical.*

#### Qualities.

It is pungent.  
yellow.  
hard.  
pulverable.  
indigenous.  
spherical.  
stimulating.

It is dull.  
opaque.  
dry.  
natural.  
vegetable.  
solid.

#### LESSON XII.

#### AN APPLE.

Idea to be developed—*membranaceous.*

#### Qualities.

It is spherical.  
odorous.  
colored.  
opaque.  
natural.  
vegetable.  
juicy.  
hard.  
solid.  
pleasant.

The eye is dry.  
brown.  
shrivelled.

The seeds are brown on the  
outside when  
ripe.  
white in the in-  
side.  
hard.

The core is membranaceous.  
stiff.  
yellow.  
hard.  
semi-transparent.

You could, if so inclined, read Mayo's pedagogy as simply part of a larger Victorian fascination with objects. Museums proliferated then, after all, and the Crystal Palace would soon display the agricultural, mechanical, and artisanal products of an empire.<sup>9</sup> But at their purest, object lessons were revolutionary, and not only because they upended pedagogical orthodoxy. While radical, liberal, and republican sentiment on the European continent churned toward the upheavals of 1848, Britain was home to a milder form of political agitation, and object lessons came to Britain during this era of reform. They were specifically taken up by Chartism, an egalitarian movement for social and electoral change pushed by the more radical members of Britain's laboring and artisanal classes, often organized through Working Men's Associations. An early leader of the London Working Men's Association was William Lovett, a cabinetmaker who was arrested along with other Chartist leaders in 1839. While imprisoned in Warwick Gaol, he and fellow Chartist John Collins penned *Chartism; A New Organisation of the People*. The tract was a "plan for the education and improvement of the people politically and socially" founded, at least in part, on a new, democratic pedagogy.<sup>10</sup> Chartist educational philosophy stood in stark contrast with the classical instruction available to the public school elite, an empty education of "mere treasured phrases, imbibed from every source, without inquiry or knowledge of reality," which, "forming no *real basis* for reflection or judgment, cannot, therefore, be properly designated *real knowledge*." So much for the *Aeneid*. "Real knowledge," according to Lovett, was accessible only "by *realities*; the thing itself must be made evident to one or more of the senses, to convey a knowledge of its form, size, colour, weight, texture, or other qualities."<sup>11</sup> An ideal workingman's education would be grounded in the tangible stuff of reality. A Chartist education was an education in object lessons.

That is not to say that a Chartist primary education would not be a literate one; far from it. Rather, Lovett sought to reconnect an abstracted language to the material reality it described. "There appears to be wanting," he wrote, "*a closer connection of words and things*."<sup>12</sup> Lovett's solution was one any cabinetmaker could love. Every school would house a cabinet of object lessons, its drawers full of items ready for investigation. The cabinet would be topped by a case of moveable type, set next to a series of wooden grooves in which students could arrange the type into words and sentences, *Scrabble*-style. As students moved through object lessons, they would pull letters from the case, arranging them into descriptive words and phrases. The pedagogic vision is clear. An instructor pulls wax from a drawer. The student feels the subtle weight of the wax in her hands, squeezing and compressing it between her fingers. Softness. She reaches for pieces of type, and builds her words with her hands. "Wax is soft." Observation and composition collapse toward each other; the act of writing becomes tangible as the letters themselves take on the physicality and heft of real objects. Object lessons were, at their most radical, a bid to reshape not just the politics of education but of language, to restore the relationship of words to the things they represented and anchor linguistic abstraction to the material substance of a workingman's life.

It was not to be. By 1848, Europe had convulsed and Chartism had dissipated. Lovett's educational scheme was never fully realized, but the Mayos continued teaching and publishing, and progressive schools on both sides of the Atlantic took up the object lesson as an instrument of pedagogy and reform.<sup>13</sup> By the late nineteenth century, its use was widespread. Sunday schools, then and now, found in the object lesson a compelling medium through which to access higher truths. The phrase drifted into political speech and advertising, and eventually into common usage. But, as the popularity of object teaching fell away, its origins became more and more obscure. Now it is only a phrase, an expression unmoored. It floats through our language like "horsepower" or "burning the midnight oil,"

an artifact of a once more substantive material world, and an object lesson in its impermanence—like the Penguin's henchmen, forever blinked out of existence.

1. See Theodore Roosevelt, "Address at Annapolis, April 24, 1906," *John Paul Jones Commemoration at Annapolis, April 24, 1906*, ed. Charles W. Stewart (Washington: Government Printing Office, 1907), p. 16, and Evelyn Waugh, *Robbery Under Law: The Mexican Object Lesson* (London: Chapman and Hall, 1939).
2. Pestalozzi's own schools, however, had more limited success. Before Napoleon's soldiers appropriated his facilities in 1799, he briefly practiced his experimental pedagogy on orphans of the post-invasion Helvetic Republic, whom he took in as boarding students. Pestalozzi was unable to establish another program until 1805—a school in Yverdon that was perhaps more successful in attracting the attention of foreign philosophers and pedagogical theorists than in matriculating students. For more, see Käte Silber, *Pestalozzi: The Man and His Work* (London: Routledge & Kegan Paul, 1973) and Johann Heinrich Pestalozzi, *Letters on Early Education* (Bristol, England: Thoemmes Press, 1995).
3. Elizabeth Mayo, *Lessons on Objects: Their Origin, Nature, and Uses, for the Use of Schools and Families* ([Philadelphia]: Haswell, Barrington & Haswell, 1839).
4. *Ibid.*, pp. 1–2.
5. *Ibid.*, p. 8.
6. *Ibid.*, p. 17.
7. *Ibid.*, p. 14.
8. *Ibid.*, p. 23.
9. That many of these object lessons carried colonial valances is without doubt. See Parna Sengupta, "An Object Lesson in Colonial Pedagogy," *Comparative Studies in Society and History*, vol. 45, no. 1 (January 2003), pp. 96–121.
10. William Lovett and John Collins, *Chartism; A New Organization of the People, Embracing a Plan for the Education and Improvement of the People Politically and Socially* (London: Watson, Hetherington, and Cleave, 1840).
11. *Ibid.*, p. 89. Emphasis theirs.
12. *Ibid.*, p. 91. Emphasis theirs.
13. A recent dissertation by Sarah Anne Carter at Harvard University has followed the history of object lessons, and the consequent modes of thinking they generated, in the US. See Carter, "Object Lessons in American Culture," PhD dissertation, Harvard University, 2010.

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